

# Training Environmental Stewards: Integrated Water Quality & Quantity Education From Mountain to Ocean

From impaired water quality to declining salmon populations, and from the loss of farm and forest resource lands to the growing demands for regional water resources, a diversity of water quality and quantity challenges face residents of the Pacific Northwest. Citizens need to understand the impacts of land use on water resources and know what steps they can take to reduce this impact. Trained WSU Extension volunteers associated with a variety of natural resource stewardship programs are working within Northwest communities and ecosystems to address these challenges.

The “Training Environmental Stewards” project will develop curriculum and training resources to provide



Class of 2005 Extension Watershed Stewards

*Photo B. Gaolach*

a coordinated approach to training volunteers about preserving water quality and quantity across several land-uses, specifically those that you would experience as you travel from the ridge of the Cascades to the Puget Sound or Pacific Ocean. This project will create a core curriculum that addresses the basic land-use impacts on water quality and quantity, as well as specific modules that address the unique impacts and best management practices associated with major land-uses. Using the train-the-trainer model, these materials will be used to train volunteers who will go out and work with individuals and communities in King County and beyond to address water resource issues.

## Program Goals:

- Develop a core water quality and quantity curriculum;
- Implement and evaluate this curriculum in volunteer training classes;
- Assist volunteers in developing and delivering outreach activities throughout the region;
- Involve youth with hands-on activities related to water quality issues;
- Showcase to the general public methods employed by agricultural producers to protect water quality and quantity.

## Curriculum Development

The goal of this curriculum is to provide a coordinated approach to training volunteers about preserving water quality across several land-uses. It is grounded in the challenges and opportunities associated with particular land-uses, and not so much in a general overview of watersheds, water quality, or water cycles.

With that goal in mind, this curriculum can be used in two ways. It can be used as a complete training system with 7-10 sessions encompassing all the modules. This is primarily designed for the organization or county Extension office that does not have other existing volunteer training programs that encompass components of this training or if they do not have the staff resources or local expertise to draw speakers from and would be teaching a substantial portion

### Water Quality Curriculum Modules

Module I:	Watersheds, the Water Cycle, and You
Module II:	Forestry
Module III:	Rural Land and Livestock
Module IV:	Agricultural Production
Module V:	Households
Module VI:	Recreation
Module VII:	Watershed Law

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## Curriculum Development - continued

of the modules themselves. The second option is to pick and choose modules that apply to specific land-uses/water quality issues that are relevant to a larger body of training being conducted, e.g. Master Gardeners, or Extension Livestock Advisors.

The focus of this curriculum is on an integrated approach to understanding water quality and quantity issues across all land-uses. We recommend that all users of this curriculum teach *Module I: Watersheds, the Water Cycle, and You*. This module introduces and lays the groundwork for understanding the science behind and the dynamic nature of watersheds, hydrology and the water cycle. It incorporates the natural landscape forms and processes (e.g. streams, riparian areas, lakes, wetlands, etc.) in addition to introducing: a) how humans interact with the watershed (forestry, agriculture, household practices, etc), b) general types of degradation (e.g. physical, chemical, biological), and c) what we can do to reduce watershed degradation.

The next four modules address specific land uses: *forestry, rural land and livestock, agricultural production, households, and recreation*. In each module, the authors address in greater detail the various types of degradation and mitigation/management options that were introduced in Module I. Each module specifically focuses on what people can do to reduce watershed degradation, ranging from best management to household practices. The curricula concludes with a more detailed look at regulations and watershed law.

Each curriculum module includes the following components:

- Learning Objectives
- Presentation Outline
- Presentation Slides and Speaker Notes
- Accompanying Handouts
- Suggestion Activities
- Related Assignments
- Resource List
- Optional Enrichment Lesson

As curriculum modules are drafted, they are being tested in WSU King County Extension stewardship trainings and water quality events (see sidebar to right.) The draft modules are also undergoing external technical review. Editorial reviews and publication (notebook binders with both hardcopy of materials and CDs) are planned for mid through late 2005.

### Water quality curricula are being developed and tested for the following WSU Extension Stewardship Programs:

- Extension Watershed Stewards
- Forest Stewardship (landowners)
- Forest Advisors (volunteers)
- Extension Livestock Advisors
- Master Gardeners
- Living on the Land (landowners)
- Beach Watcher programs

### Water Quality Events and Training supported by WSU Extension Stewards

- WSU Harvest Celebration Farm Tour
- Small Farm Expo
- Steward outreach and education to general public, youth, landowners, and public/private groups

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